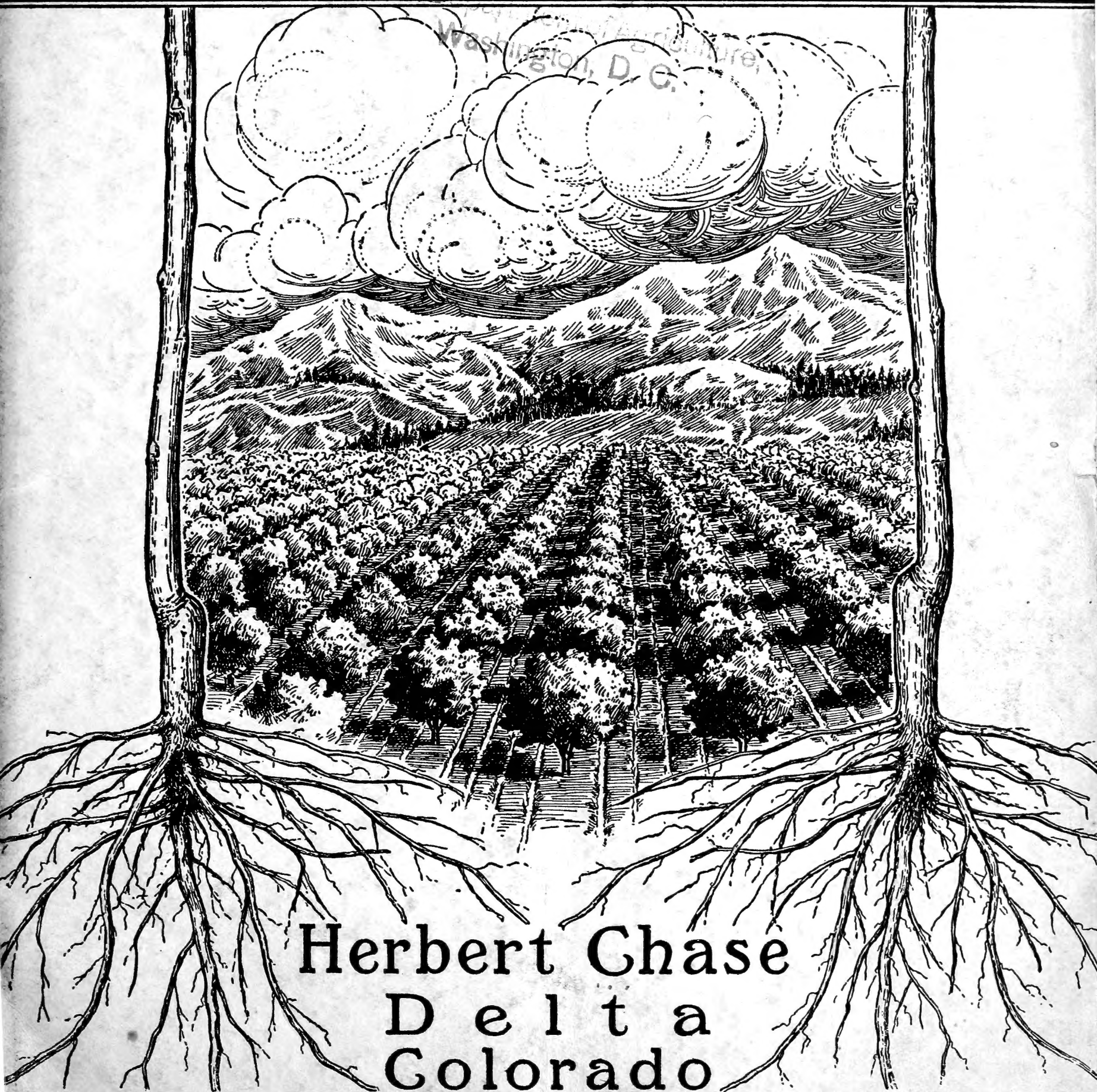


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# Chase Trees for Irrigated Sections



Herbert Chase  
Delta  
Colorado



## PREFACE

**T**HIS is meant to be a personal letter to men in the irrigated sections who are interested in tree-planting. It is written to do us both good; it tells plainly about my business; I expect you to read every word.

I have been more than two years gathering the data; have all figures on file, and shall be glad to show them to any one interested.

The names and addresses are genuine. Write to any, or see the persons, and ask if my statements are true. I shall be glad to have you question any one.

There are many nurserymen from whom you can buy reliable trees; if you wish, I shall take pleasure in referring you to them, but I am not working for them; I am trying to attend to my own business; that will keep me busy.

I quote much from "Fruit-Growing in Arid Regions," by Paddock and Whipple, recognized authorities on this subject. The authors were connected with the experimental station at Fort Collins, Colorado. The book was written after long experience and experiments in this section.

The authors are in no way connected with, and have no interest in, the nursery business. Their work has been along the lines of developing orchards. They tell the plain truth; the book is a real help, and ought to be in the hands of every orchardist in the irrigated section.

HERBERT CHASE

Delta, Colorado, Fall, 1911.

*"A man may build a better mouse-trap . . .  
and, though he build his hut in the woods, the  
world will make a beaten path to his door."*

# ORCHARD PLANTING DIRECTIONS

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FOR IRRIGATED SECTIONS

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## MAILED FREE ON REQUEST

The rule is, men in the irrigated sections have sense and use it; they do things and are unafraid.

These directions are for busy folks; they are short and plain; they are suited for first-class trees, whether Sammy Smith's, Billy Stark's, yours or mine.

I wish to acknowledge help from the following well known fruit growers in preparing this pamphlet:

MR. J. J. BRIDGES . . . . . Palisade, Colorado  
MR. A. L. ROBERTS . . . . . Paonia, Colorado  
MR. J. D. HAWKINS . . . . . Paonia, Colorado  
DR. A. E. MILLER . . . . . Delta, Colorado  
MR. C. T. RULE . . . . . Paonia, Colorado  
MR. GEO. H. MERCHANT . . . Paonia, Colorado  
MR. WENDELL PADDOCK . . . Columbus, Ohio  
(Formerly Fort Collins, Colorado)

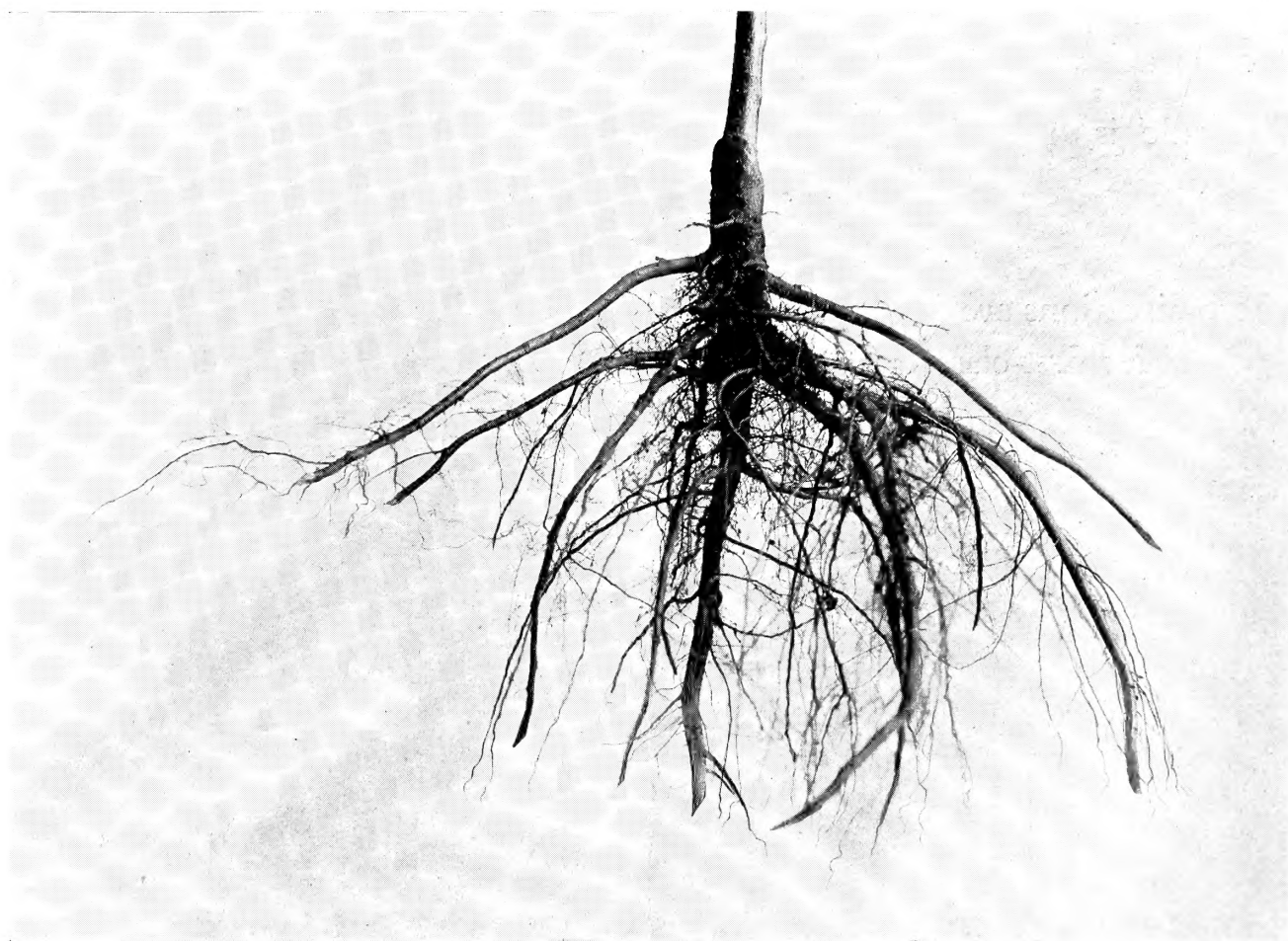
Also MR. J. H. BAIRD, Superintendent of the Hale Orchard, Fort Valley, Ga., probably the largest and most successful peach orchard in the world.

## HERBERT CHASE

Chase Trees

DELTA, COLORADO





**No. 1.**  
**ROOTS OF THE BEST TREE AS IT COMES FROM THE NURSERY. THE TRUNK IS A STRAIGHT,**  
**STRONG WHIP, A LITTLE MORE THAN FOUR FEET IN HEIGHT, AND**  
**HAS LIVE BUDS ALONG ITS ENTIRE LENGTH.**





No. 2.

ROOTS SHOWN ON OPPOSITE PAGE PROPERLY PRUNED FOR PLANTING. THE ROOTS HAVE BEEN SHORTENED TO EIGHT TO TEN INCHES. ALL ARE CUT WITH A SLANT ON THE UNDER SIDE SO THAT THE CUT SURFACES WILL LIE DOWN.

## THESE ILLUSTRATIONS ARE OF APPLE TREES.

In a general way these directions apply to all hardy fruit trees except Cherry, which should not be pruned as heavily. Peach Trees require a little different treatment, which is noted.

*The Best Tree is a Strong, Straight Whip, one year old, with live buds all down the trunk.*



No. 3.

No. 3.—The tree properly planted. Pruning should begin at time of planting.



No. 4.

No. 4.—The same tree six months later. Twelve branches were developed, measuring 261 inches; no limbs were removed or pinched off. The tree had the benefit of all leaves it could support, which helped to develop more roots, thus the tree received all the nourishment provided by nature. It grew vigorously, making the very best orchard tree it is possible to have.

During the first summer's growth, do not remove a leaf or branch, unless vigorous branches are sent out close to the ground, and the upper branches to be used for scaffold limbs, are weak; in which case, pinch the tips out of the lower branches when they are 8 to 10 inches long, which will throw the growth where it is wanted. Every leaf gives the tree added strength, and helps it to become firmly established in the ground. If limbs grow where they are not wanted, let them alone until pruning time the following winter.

"Strong, yearling trees are always preferable to older ones."—*Fruit Growing in Arid Regions*, p. 89.



Tree on opposite page, after the top was pruned, ready for the second year's growth. Five limbs were left, but many orchardists would remove limbs No. 1 and 2, leaving only three scaffold limbs. I show five scaffold limbs because many wish to leave five. This shows how to leave five, or three limbs, as you prefer. On account of spraying, I think three limbs best.

Note thickness of the trunk.

"When planting one-year-old apple trees, there is little likelihood of getting trees that are forked, but in older stock, some of the trees will be forked, with the two leaders of nearly the same size. If trees of that sort are planted they will usually result in one of the limbs being split off when it is loaded with fruit."

—E. H. Favor, in the *Fruit Growers' Guide Book*.

PEACH. A tree 3 to 4 feet tall which will have a few side limbs and some buds along the trunk is best. Peach trees 4 to 6 feet tall are not as good because the branches are too high for scaffold limbs and there are no buds on the trunk where scaffold limbs are wanted.

Cut off the main stem about 20 inches above the ground; there is no ironclad rule. I think 20 inches best.

If side branches are left, cut them off smooth close to the main stem, leaving a straight whip. The tree will develop all the side branches you want, and some to spare.

At the end of the first season's growth. Prune, leaving 3 or 4 branches as will be most evenly distributed around the tree, for scaffold limbs. Cut these off about 12 inches from the main stem. The lower scaffold limb should be 5 to 8 inches above the ground. The upper one near where the top was cut off at the time of planting.

I wrote six well-known successful Colorado peach growers asking the following questions:

1. How high above the ground do you cut off the top?

Answers: Three, "18 inches." Three, "20 inches."

2. If there are side limbs left, how near the main stem do you cut them? Do you leave one or two eyes, or cut to a switch?

Answers: One, "Leave one eye." One, "Leave two or three eyes." Four, "Cut to a switch."

3. If no side limbs are left, will the tree develop as many side limbs as you want?

Answers: All, "Yes."

4. When pruning to go into the second season's growth, how many scaffold, or side limbs, do you leave?

Answers: One, "Four or five." Two, "Three or four." Three, "Three to five."

5. When pruning to go into the second season's growth, how near to the main stem do you cut these scaffold limbs off? i. e., how long a scaffold limb do you leave?

Answers: Two, "12 to 18 inches." One, "2 to 3 feet." Three, "Cut off  $\frac{1}{3}$  to  $\frac{1}{2}$  previous season's growth."

Because the answers do not agree, because the variation is slight, it shows that every man knows his business and all are right.

Mr. C. T. Rule, Paonia, wrote:

"You omit one of the most important questions: number of trees per acre. Advise growers to plant less trees on an acre. Peaches need more sunlight, and it is a proven fact here that orchards where the trees are 20 feet apart, produce as many boxes as the closer planted, and much better trees and finer fruit."

I sent the same questions to J. H. Baird, Superintendent of the Hale Orchards. His answers were:

1. "Cut off at 18 inches."
2. "Cut close to main stem, leaving switch."
3. "Yes."
4. "Three is the proper number. Four could be accepted; never more."
5. " $\frac{1}{3}$  to  $\frac{1}{2}$  season's growth."

He adds:

"I believe firmly in low, open headed trees. Most people get too much wood and too much fruit for best financial results."

I asked his opinion on Rule's suggestion. He said, "Rule evidently knows his business. He is absolutely right."

Mr. Baird, the son of a New Jersey nurseryman, was selected by Mr. Hale on account of his efficiency, his knowledge of trees, etc.

THE SUCCESSFUL GROWING of an orchard depends on doing a few simple things; understand, DOING 'EM.

There is no secret, no mystery, no difficulty, but you must DO THINGS.

Trees fail or die through ignorance or neglect.

Newly planted trees start their buds from food nature stored within the tree while it was growing in the nursery.

You must prune before planting, then plant so that nature can supply more food, (through the roots and leaves) to support the newly started buds and give additional growth.

Do not plant when there is frost in the ground or in the air. If a hard freeze comes after the tree has been planted, no harm is done, but that tree if well planted, will grow off earlier, faster, and make a better tree than if it had been planted later in the season.

IT IS IMPOSSIBLE TO PLANT WELL with all the roots and all the tops left on the tree as it comes from the nursery.

ROOTS. Fine hairy roots are feeders. They slough off and new feeders grow from the ends of the larger roots. Therefore, cut most of the fine roots away. If the long roots are not properly pruned, they will be cramped, will mold and rot off. Under these conditions, the tree must heal and recover; must "get over it" before it can attend to business and grow. Shorten all to 8 to 10 inches; use a sharp knife and cut with a slant on the under side as shown in Picture No. 2, so that the cut surfaces will lie down. The cuts will heal quickly; will begin callousing at once and will send out the feeding roots promptly.

There will be no decay, no mold, no sickness, everything ready for business. If roots are broken, ragged or bruised, cut them off; if they remain they will mold or rot off, which weakens the tree.

TOP. If part of the top is not cut away, leaves will start out over the entire top; roots are not yet established to feed those leaves. The tree will struggle for life and will probably starve; if it does pull through, it makes only a weak growth.

"The hole should be large enough to let the tree stand two or three inches deeper than it was in the nursery. The tree in position, fine top-soil is pushed back in the hole and worked in about the roots. With the roots well covered with fine soil and the top-soil slightly tramped, the water is turned into the furrow. After a thorough watering, fresh soil is thrown about the tree, and the furrow is left open for a second watering ten days or two weeks later."—*Fruit Growing in Arid Regions*, p. 52.

As soon as planted, cut the top off to desired height. Do not wait. If the top is left, it exhausts the moisture and strength from the body and root of the tree. If you have not decided on the height, make it 32 inches. (See Picture No. 3.)

At time of planting and two or three years afterwards, trees are pruned to give them the proper shape for bearing regular and heavy crops; to carry those crops well; to enable spraying to be done effectively, etc., etc. When the trees reach bearing age, they are pruned for the purpose of enabling them to produce fruit of superior color, size and quality.

"THE WORK OF PRUNING should start at the time the tree is planted in the orchard. This is a critical time in the life of the tree and neglect of pruning at that time influences the tree during its remaining years."—*E. H. FAVOR, in the Fruit Growers' Guide Book*, p. 181.

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## DO THESE THINGS

1. Prune roots as shown by Picture No. 2.
2. Prune tops as shown by Picture No. 3. For this pruning use a sharp knife.
3. Be earnest.
4. Have faith.
5. Go by the book.
6. Know you are doing your work well, and fear not.

**Cross-Pollination  
Distances for Planting  
Pruning Trees of Bearing Age, Etc.**

I am not well enough informed on these questions to give directions for irrigated sections. For two years I have been gathering information; am still at it. I will not print ready-made directions; neither of us has time for idle words; you want plain talk with a meaning; I hope to be able to make such talk within a year.

**HERBERT CHASE**

**Delta, Colorado  
Spring, 1912**





Main ditch from Gunnison Tunnel to Uncompahgre river, 12 miles long. The Gunnison Tunnel is 30,645 feet (nearly 6 miles) long, beneath the Rocky Mountains. Capacity 1,300 cubic feet of water per second of time, or 17 per cent larger than the Erie canal. Total cost of project \$6,000,000. Land to be irrigated 140,000 acres.

## Something About My Business

**S**INCE 1889 I have been engaged exclusively in growing and selling nursery stock. My stock has been sold without the use of agents or salesmen, directly to large planters and nurserymen.

Sixteen years ago, A. W. Carr, of Delta (then operating a small nursery here), bought a thousand trees from me; they were received in good condition, and grew. Mr. Carr was pleased; his customers were pleased. Next year he doubled his order, with the same result. He did not employ agents; sold his trees himself; knew the men who bought. When those trees began bearing, they were true to name; his business steadily increased on the merit of what he sold; thus my business with Mr. Carr increased. Mr. Carr's customers were among the best fruit-growers in this section; they came back year after year because they wanted those particular trees.

Today A. W. Carr is well known to the fruit-growers of the Western Slope. The most intelligent men in the business are among his customers; he enjoys their confidence and respect; the business he conducted and the trees he delivered brought about this condition. Customers of fifteen years ago are still customers. Through Mr. Carr I learned to believe I could conduct a large, high-class nursery business here, dealing directly with planters; that I could sell trees over a wide territory without agents, commissions, brokers, cheap talk, or "hot-air," just as I have been selling to nurserymen all through the United States; that I could deal direct with planters, thereby saving them much money, and giving them the opportunity to buy direct from a responsible party in their own country. I thought I would enjoy living in this climate. I am glad I came. I have not changed my mind about the business, but more than ever I am convinced that men here want reliable trees; that some will investigate and will place their orders where they will get what they want.



## CHASE TREES FOR IRRIGATED SECTIONS

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I came here in the summer of 1909, and built the most efficient packing-house in the nursery business between the Missouri river and the Pacific Coast; last spring from this house we sold 255,000 trees to parties who bought trees just as they would buy a plow, a machine or a hat; they knew what they wanted, and bought on merit; net talk; net price. I conduct my business on straightforward, decent, dependable lines, not only for pleasure and satisfaction, but because I know from experience and observation that is the kind of business which yields the best dividends.

With the possible exception of about a dozen, I am personally known to every important nurseryman in the United States. I take pleasure in referring to any of them, as to the stock I grow, my system of handling, my reliability.

I also refer to the important fruit-growers of Mesa, Montrose and Delta counties, Colorado, where my trees have been planted for the past fifteen to seventeen years, and to any of the parties named in this booklet.

Also to any of the banks or business houses of Delta. There are three banks here: the Delta National; the First National; the Colorado State. All are well managed, able concerns. Officials of all of these banks are interested in fruit-growing; any of them will be glad to answer questions and give information.

My trees are for sale to men who want to buy trees; who want the best. They are not sold through agents. I do not want orders for a few odd trees of several varieties, because I cannot handle such orders to advantage.

I do not expect orders from men who will not take the trouble to investigate the reliability of nurserymen, or who will place orders on agents' talk.

I expect the business of intelligent business men who will plant trees as a business proposition. I expect the business of men who want reliable trees of the best grade, and are willing to investigate and find out if trees they order can be depended on.

In conducting business on lines and methods herein outlined, I am confident of securing a liberal patronage from those who plan to plant commercial orchards.

## Why I Do Not Employ Agents

UP in Maine, in 1856, Ethan Allen Chase was employed by a New York nursery as an agent to sell their trees. One year of the work was sufficient; he did not like their methods; he had the old-fashioned idea that the plain truth would make as many sales, and be more satisfactory in the end. Furthermore, he then would enjoy the pleasure derived from honest transactions. The next year he began business on his own account, and was a success from the start. In the sixties, he and his brothers established the firm of Chase Brothers, the New England Nurseries, Rochester, N. Y. At that time the nursery business was crude; little system, no stock books, no regular way of keeping track of what was grown or sold; it was all more or less guesswork. Ethan Chase made stock books, record books, nursery forms, put things in order; today the forms used by the great nurserymen of the country are practically those he made.

In 1891, Ethan Chase moved to Riverside, California, where he began the planting of citrus nurseries on a large scale, and orange groves by the thousand acres. Later he established the National Orange Company, of fifteen hundred acres (one of the largest orange companies in the world), of which he is president. By his methods of square dealing he has established for his brands a reputation that is worth 25 cents to 50 cents a box above the average.

He is eighty years young; no man living in southern California is esteemed more highly. For more than twenty years it was my privilege to be associated with him. I tell you these things that you may understand that I am in a position to know what I am talking about.

While traveling last January, Mr. A. L. Roberts, of Paonia, Colorado, met Mr.

## HERBERT CHASE, DELTA, COLORADO

W. N. Filson, of Hastings, Nebraska. Mr. Filson was preparing to plant an orchard near Elberta, Utah. He asked Mr. Roberts where he could buy reliable trees; was sent to me. He ordered 900 trees; was well pleased.

Near the Filson place is the property of the Utah Lake, Land, Water & Power Company. About the first of March they sent us a small order, and since that time have sent six orders, aggregating 15,000 trees.

In the same neighborhood is the property of the Mosida Fruit Lands Company, who after placing a small order, sent additional orders, aggregating 3,000 trees.

A. E. Denne, of Green River, Utah, wanted 100 trees for his personal use. He heard about my trees and sent an order. Afterward he sent additional orders for his neighbors, amounting to 1,100.

These sales were made without cost to me, simply because the trees were good, and the purchasers wanted the best.

In the spring of 1910, the Cedaredge Realty Company, Cedaredge, Colorado, bought 4,500 apple trees from another nursery. When they arrived, the inspector wanted to open and inspect them in my house, because I had every facility to care for the trees, in fact the only place here to do such work. I told the inspector to go ahead and use the house as though it were his own, which was done. On December 22, 1910, Mr. Smith, of the Cedaredge Company, told me it would take 2,500 trees to replace what they lost from the 4,500.

About four miles from this Cedaredge Realty Company planting, W. S. Girardet planted 4,850 trees from us; 4,801 grew and are called *good* by Mr. Girardet; he was sheriff of this county; is well thought of; is connected with folks who are developing a large orchard. July, 1910, his company sent an order to us, for trees to be planted in the spring of 1911, "at the market price," because from their experience they knew what they wanted.

Stockham Brothers are the principal men of the Cedaredge Bank. That bank handled the collection of draft, etc., for the Cedaredge Realty trees. Stockham Brothers have recently invested \$100,000 in the Antelope Hill property, an orchard proposition. They came to us with their order (30,000 trees) for that planting.

June 7, after planting, W. B. Stockham told me, "They are fine, won't lose an apple except what the dogs killed; cherries are fine; peaches not so good."

E. P. Watson owns a ranch at Cory, this county. Last spring he planted 200 Rome Beauty from us; every tree grew. Watson is a mine owner and lives at Denver and New York, coming here to the ranch when he feels like it; likes to do things; likes trees that grow; orders mine, and asks not the price—and pays exactly the same as though he did. S. H. Lacock, Cory, is his resident manager.

A short distance from Watson's place, W. M. Kennicott planted 400 Rome Beauty from us; all grew but two. Kennicott says, "ants killed one, and I haven't had time to find out what got the other."

W. P. Dale stopped me on the street and asked me to enter his order for 700 Rome Beauty to be planted next spring; then he asked the price; he wanted my trees.

Another prominent man connected with the fruit industry here, who had bought a few of our trees last spring, stopped me on the street and asked me to reserve for him 5,000 Winesap, Jonathan and Rome Beauty for planting next spring.

CORY, COL., June 22, 1911.

. . . . I want to say further, I do not consider buying trees from any other concern, as I have had expensive experience with others in two ways: trees not living, and not being true to name. I expect to duplicate my order next spring.

HENRY HAWKER.

PAONIA, COL., June 15, 1911.

We planted 525 of your trees, three failed. We consider them the best quality of trees we ever bought.

VAN DREREN BROTHERS.

YUCAIPA, CAL., June 17, 1911.

The trees I bought from you last spring are the best in the valley; I lost only six. I shall want more next spring, and, if you can supply the stock, my neighbors would like trees like mine. J. P. FARGO.



- No. 1. The best tree for planting in irrigated sections; straight, strong, one-year-old whip, about four feet tall.  
 No. 2. A nearer view of No. 1. Note the buds all along the trunk. These develop into branches. You can have branches exactly where they are wanted; can shape the tree as you wish.  
 No. 3. The one-year tree in nursery. Showing how the buds along trunk are preserved; the leaves are not rubbed off, at the base of each leaf is a bud.  
 No. 4. Properly planted (slightly deeper than it was in nursery), and cut back to 32 inches. Opinions vary as to the best height to head; 32 inches seems best, because then limbs can be developed 6 to 8 inches apart, thus avoiding crotches, and distributing weight of fruit. Some orchardists prefer 30 inches, others even lower.

SUNNYSIDE FRUIT RANCH, CORY, COL., July 1, 1911.

The 3,000 trees from you last spring were all around the best I ever handled; the finest roots. They are better now than trees I planted a year earlier; in fact yours are so much superior, that I would not plant others if I could get yours.

G. M. GWYNN.

MONTROSE, COL., May 30, 1911.

The 1,100 trees from you in 1910 were the finest I ever planted. The 1,500 purchased this spring were equally good.

EDWARD G. WIDMAN.

AUSTIN, COL., June 16, 1911.

Trees received from you this spring are all alive and growing. I did not expect to lose any, as I planted 5,000 of your trees before, and lost but few.

JOHN HART.

CORY, COL., March 11, 1911.

We appreciate the advantage of early planting, which, coupled with quality and condition, such as you have given us the past five years, can't be beat. Our percentage of loss is practically nothing. Your trees have always been well rooted and dormant.

STARKS & MATTHEWS.

CEDAREEDGE, COL., June 20, 1911.

Not a dead tree among them (800); bought some from an agent that cost more than yours, but they look sorry now beside yours. Will see you when I know how many I want next year. If people only knew how much better trees yours are, the agents would be out of business.

C. W. RINEHART.

These men buy trees for business reasons; they want the best.

Not one buys my trees for personal reasons.

This is a country where most tubs stand on their own bottoms.

This is far more satisfactory than agents.

If you buy \$100 worth of trees from me, you pay the bill in full, and I receive \$100 net cash. If you buy from an agent and pay in full, the nurseryman employing the agent will receive from \$50 to \$65 net cash, the rest goes to the agent, deliverymen, etc. Who stands the best chance to give you reliable trees? Figure it over a little. If you plan to invest in trees, it will pay you to investigate. Do not take my statement, but go to your neighbors, or to fruit-growers of standing and ask about my stock. It would be strange if you failed to find some who do not care to recommend it, but the chances are, that you will hear more commendation than condemnation.



5



6



7

No. 5. Two-year tree. The branches are close together; if these are used for permanent limbs, there will be crotches, which may break under a load of fruit. If you cut these away, then tree must force new buds and branches, because there are no buds on this trunk. See pictures 6, 7 and 10. Many agents talk about large trees of "bearing age," and give the impression that such trees bear fruit earlier, which is a mistake. Under no conditions will the older tree bear fruit earlier.

No. 6. A near view of trunk of No. 5. Note there are no buds; they were rubbed off in nursery, as shown by No. 7.

No. 7. The two-year tree in nursery. Showing how the buds are destroyed; the nurseryman rubs them off.

## Planting—Pruning at Time of Planting—Pruning After First Season's Growth

STEVENSVILLE, MONT., April 2, 1911.

The *ideal* tree is a strong year-old whip, with a full, healthy root-system, and buds not rubbed off the trunk. Such a tree, free from nursery diseases, is worth more money than any older tree. I have planted in the Bitter Root Valley 1,600 acres in apple orchard. The finest orchard in the whole valley is from such trees.

J. M. ENSCHEDE.

Mr. Enschede is superintendent of the Sunset Orchard Company, Stevensville, Montana, one of the largest orchard projects in the United States.

**PLANT EARLY.**—Trees must not be planted when there is frost in the ground or in the air, but frost or a freeze after the tree has been planted does no harm. Early planting will give far better results than late planting.

In the arid fruit sections of the West, spring planting is really the only practice that can be recommended . . . . March and April are the favorable months for tree planting. As a rule, the trees may be planted as soon as the ground is in condition to work in the spring; we may almost say, the earlier the planting the better. The tree makes its start from stored-up plant-food, and any growth the tree makes before it is planted weakens it that much.—*Fruit Growing in Arid Regions*, p. 84.

**PRUNE AT PLANTING.**—When a tree is taken from the nursery, part of the root system is left in the ground, and consequently the balance between the roots and top is deranged. This must be restored by proper pruning.

All bruised and torn roots should be carefully removed and cut back to sound wood, leaving smoothly-cut ends that will heal rapidly. If this is not done, decay is likely to set in.

Long, straggling roots may well be shortened, and any tangled mass of fine roots should be shortened and thinned. Cut the trunk back to 32 inches as soon as the tree is planted.





No. 8. A one-year Jonathan, planted spring 1910, on the Beezley ranch, Cory, Colorado. Developed four branches, measuring 162 inches.

No. 9. Above tree after being pruned. After the first year's growth, choose from three to five branches, located so as to avoid crotches, and properly spaced (6 to 8 inches apart) along trunk. Cut these back to 12 to 14 inches, remove all others. This tree with three branches is shown, because it comes near to fitting all cases. Now and then you may leave four or five branches, but three are enough to develop the BEST ORCHARD tree, and safest to depend on. Do not prune when the wood is frozen; as a rule, prune in early March.

No. 10. A two-year Jonathan, planted April, 1910, by Foster G. Williams, Garnet Mesa, Delta, Colorado. Picture taken after the year's growth; this tree was above the average. At planting the branches were cut away, in the effort to develop limbs where they were wanted. Note the weak growth.

No. 11. One of the one-year Jonathans planted by Mr. Williams, April, 1911, referred to below. This is an ideal tree to prune; strong branches have developed just where the orchardist wants them.

Mr. Williams bought 560 two-year Jonathans from another nursery; these were planted; he had more land and came to us for 100 one-year Jonathans.

Both lots planted in the same field. All were planted by the same man. All received the same treatment. All were planted for business. All were the same variety. Every effort was made to make every tree grow.

Of the 560 two-year trees, 255 failed to start. Those that did live made a weak growth, averaging less than 9 in.

Of the 100 one-year trees, 7 did not grow. Those that lived put on an average growth of more than 120 inches.

Spring, 1911, Mr. Williams came to us and bought 255 one-year trees, to plant where the two-year failed.

During the first summer's growth, do not remove a leaf or branch, unless vigorous branches are sent out close to the ground, and the upper branches, to be used for scaffold limbs, are weak; in which case, pinch the tips out of the lower branches when they are 8 to 10 inches long, which will throw the growth where it is wanted. Every leaf gives the tree added strength, and helps it to become firmly established in the ground. If limbs grow where they are not wanted, let them alone until pruning time the following winter.

Practically all of the elements that nourish and build up a tree, except carbon, are taken from the soil, by the roots, in liquid form. This material is carried in the cell-sap, mostly through the outer sapwood, to the leaves. Here the crude food materials are changed by the influence of the sunlight, and the green substance of the leaves to a form that can be readily assimilated by the plant. This will illustrate, briefly, how important the roots are to the plant.

Is it any wonder, then, that the failure to cut back the tops of newly-planted trees results in the death of many of them? This is especially true in the arid region, as the dry air and intense sunshine cause the young trees to dry out rapidly.—*Fruit Growing in Arid Regions*, p. 81.

When properly pruned, the newly planted tree does not put out more leaves than nature can care for, while the tree is becoming established.

The hole should be large enough to let the tree stand two or three inches deeper than it was in the nursery. The tree in position, fine topsoil is pushed back in the hole and worked in about the roots. With the roots well covered with fine soil and the topsoil slightly tramped, the water is turned into the furrow. After a thorough watering, fresh soil is thrown about the crown of the tree, and the furrow is left open for a second watering ten days or two weeks later.—*Fruit Growing in Arid Regions*, p. 52.

In the arid states, at least, the age of the tree at the time of setting seems to have little to do with the



Division Dam and Headgate, Redlands Canal Water taken from the Gunnison River.

age at which the orchard comes into bearing, so that one really gains nothing in setting trees too large.—*Fruit Growing in Arid Regions*, p. 39.

ONE-YEAR-OLD TREES may mean little, poor, useless things, a few inches tall, or well-developed, beautifully rooted, fine trees, 4 feet tall. The trees we have sold, and offer for sale, are the best one-year olds, 4 feet or over in height.

Strong yearling trees are always preferable to older ones.—*Fruit Growing in Arid Regions*, p. 89.

NAMPA, IDAHO, March 20, 1911.

I have planted 450 acres of apple orchard in the irrigated section. One-year-old trees, because supplied with buds all the way from the ground to the top, can be headed at any desired height, and make an orchard of greater uniformity. I have planted two- and three-year-old trees, but do not succeed in getting a full, uniform head that will land the greatest number of bushels in one crop. The trees bought from you last season were the best ripened, in the best condition, and are making the best growth of any purchased.

E. F. STEPHENS.

This refers to 33,000 one-year whips purchased spring of 1910. Mr. Stephens is a nurseryman and orchardist of Nebraska and Idaho. He is known in the Middle West as an authority on horticultural subjects. His articles are sought by such publications as, "Field and Farm," "Ranch and Range," "Nebraska Farmer," "Twentieth Century Farmer," "Prairie Farmer," "Deutsch Amerikan Farmer," "Hospodar" (Bohemian), "Danske Pioneer."

Mr. Stephens has been sent on long journeys about the United States in search of information on horticultural subjects. He has been a customer of mine for twenty years.

GRAND JUNCTION, COL., June 1, 1911.

For my own planting, I have used your trees the past seven or eight years; they have given me the utmost satisfaction. After becoming acquainted with your stock, the Association began buying it for the members. We have used it for five years with the utmost satisfaction; some years as many as 50,000 to 60,000 trees.

J. F. MOORE.

Mr. Moore is manager of the Grand Junction Fruit Growers' Association, the greatest fruit growers' association in this section.

MONTROSE, COL., May 16, 1910.

I expect to set from 60 to 100 acres in spring of 1911; I want your trees. I do not think there is a tree (1,000 Rome Beauty) that has not started. If they grow as well as they promise, it will be as good a showing as I ever saw.

J. F. KYLE.



As a rule, trees are inspected on depot platforms, exposed to sun, wind and evaporation, as shown by these photographs. This photograph taken on the depot platform in Delta, spring, 1910.

I do not know Mr. Kyle except by correspondence. He is one of the important fruit-growers of the Western Slope; is regarded an authority on fruit-growing; is often quoted in the press.

OLATHE, COL., Nov. 28, 1910.

I planted 1,250 cheap trees; about ten per cent lived; pretty stiff price. Well, suckers will bite! I want my trees from you next spring.

CARL WESTESSEN.

Mr. Westesen is an earnest, hardworking Dane, who walked into Montrose county a few years ago and has made good. His note is worth one hundred cents on the dollar and accrued interest. No matter the amount, his *note is good*; he is built that way. Spring of 1911 he planted our trees; July, 1911, he wrote us, "If I plant more orchard I shall surely plant your trees."

The importance of low-headed trees for this climate cannot be too strongly emphasized. Hundreds of trees are dying in all parts of the West because of the exposure of the long trunks to the afternoon sun, either directly or by reflection, from hot, dry soil in summer or from snow in winter.—*Fruit Growing in Arid Regions*, p. 84.

Fruit trees in the intermountain country are more inclined to overbear than to overgrow; and to keep them well pruned and within bounds is not only beneficial to the tree but it is an advantage to the grower, as most orchard operations are facilitated thereby.—*Fruit Growing in Arid Regions*, p. 44.

## Inspection by County Officers

I do not know of states requiring as rigid inspection of fruit trees as Colorado. I hear much complaint from fruit-tree men on account of this, but the law is right. It gives the planter a measure of protection not furnished by most states. As a result the orchards of this section are freer from insect pests and diseases than the orchards of any other state east of Colorado,—perhaps in the country; I do not know about that.

Our inspection room (20 x 50 feet) is constructed to give an abundance of light. Moisture is controlled; no wind, sun, dust, heat or cold. Results from our trees show careful handling.





Photograph taken in Delta, April 3d, 1911. A thermometer placed on the brick wall in the sun registered 97°. At that time, the temperature in my house was 42°.

It is the worst kind of folly to plant a tree that has a trace of disease ; not only is the tree almost sure to die before it comes into full bearing, but the infection may be spread by the cultivator, or in the irrigation water to all parts of the orchard.—*Fruit Growing in Arid Regions*, p. 83.

**BAD TREES.**—Trees, like folks, vary. Some are weak, others strong. No nursery in the world is entirely free from trouble. We constantly watch for troubles known to the nurserymen. We can have, for the asking, advice and help from the Department of Agriculture at Washington, and the Agricultural Experiment Stations and Colleges ; we call on them often.

Row by row, our trees are as clean as any grown in the world ; there are other nurseries whose trees are as good. In digging, grading and preparing for shipment, every care is used to select only vigorous, high-class trees, which are submitted to the inspectors.

Sometimes the inspector finds a tree in perfect health, but lacking in some way, which we do not want used, and which we ask the inspectors to throw out. Our trees must be in perfect health and in perfect condition every way.

## Wind

“Air naturally in motion.”—*Webster*.

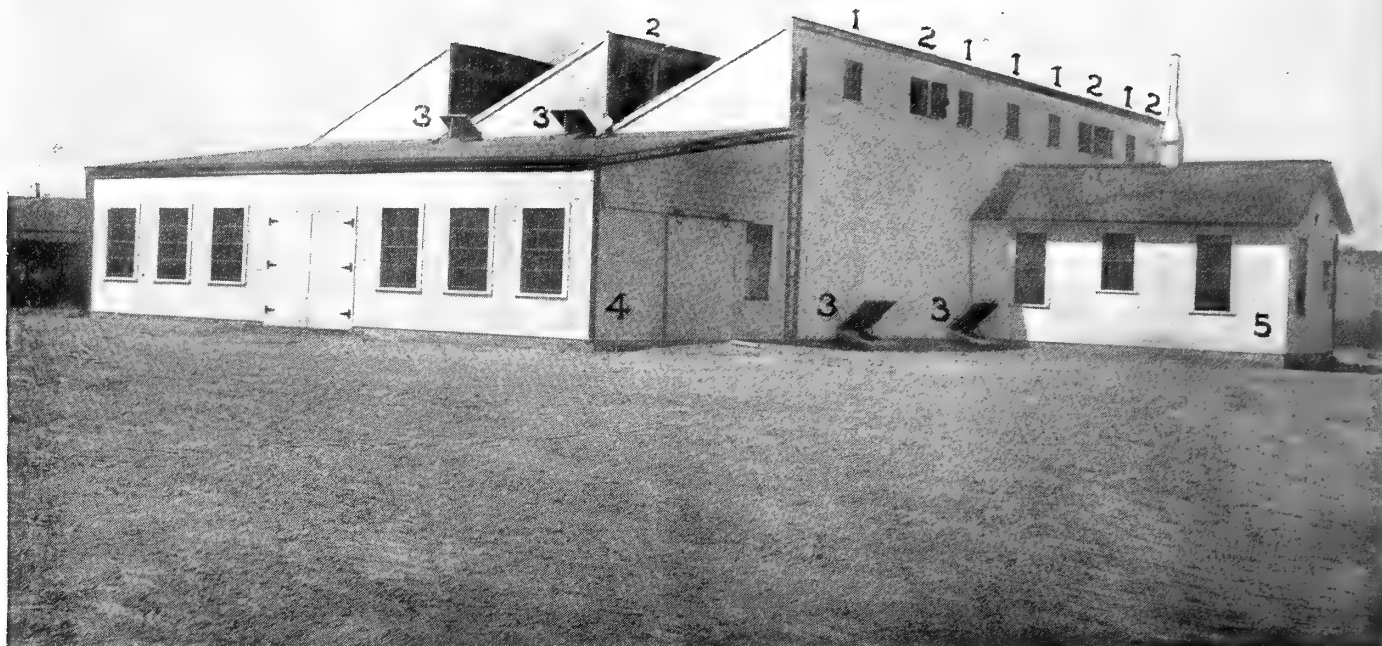
Some of that here too ; but little ; it comes during March and April, tree-planting time.

If trees are exposed to these drying winds, they will suffer more than with the same exposure in most sections. This is an arid country ; evaporation is quicker than in humid sections.

## Packing-House

For use only during planting time.

Not a cold-storage house ; no ice ; no artificial refrigeration. Built with a series of dead-air spaces in walls and roof, which keep out heat and cold, with the addi-



Packing-house, Inspection room, Office. 1. Windows (cannot be opened), two solid sashes with air-space between. 2. Vent doors (bound with wool felt and canvas) for escape of hot air. 3. Ends of cold-air ducts. 4. Inspection-room. 5. Office.

tion of air-ducts beneath the floors to admit cold air, and vent doors in roof to allow warm air to escape. Refrigerator doors built from plans furnished by the Barker & Haskell Car Company, who also furnished the lever handles to force the doors air-tight.

We fight heat without ice, cold without fire. It is well-known that cold air is heavier than warm. Accordingly, if the temperature in the house is higher than wanted, the cold air ducts and the vents are opened; when the air is changed and the temperature is right, ducts and vents are closed; the temperature will remain practically stationary for several days. Thus the trees (packed in sphagnum moss) are held in a uniform, natural temperature, not high enough to start sap action, not dry.

During March and April, temperatures out-doors and in the house were as follows (Hicks self-registering thermometers used): "Outside" temperatures taken on north wall of packing-house, away from the sun.

	Outside	Deg.		Inside packing-house	Deg.
March,	Average highest . . . . .	60.8		Average highest . . . . .	44.6
	Average lowest . . . . .	29.4		Average lowest . . . . .	33.8
	Variation . . . . .	31.4		Variation . . . . .	10.8
April,	Average highest . . . . .	68.1		Average highest . . . . .	47.7
	Average lowest . . . . .	32.7		Average lowest . . . . .	36.2
	Variation . . . . .	35.4		Variation . . . . .	11.5

The efficiency of this house is shown by the following:

May 17, 1910, we delivered to Richard Smith, Cedaredge, Colorado, 1,100 trees. April 6, 1911, we wrote Mr. Smith asking about that planting; he replied, "We did not lose more than 10 per cent."

May 18, 1911, we delivered to Wm. Starks, Cory, Colorado, 50 trees. All grew. If these trees had been cared for in the usual way, all would have been in leaf or dead by the latter part of April.



Interior of Inspection-room. Ample light. No sun; no wind; no frost; no evaporation.  
Trees handled this way are bound to give results.

PAONIA, COL., June 2, 1911.

If the practical orchardists of Delta county could see your packing-house and the methods used there for inspecting and handling trees, they would never depend on trees that are obliged to stand inspection in the open air, exposed to sun and wind. I believe you have the most up-to-date plant for handling trees in Colorado.

L. T. ERNST, Horticultural Inspector for Delta county.

DELTA, COL., June 6, 1911.

. . . . I could not suggest an improvement. Your inspection-room is light and airy; trees receive the most critical examination; not being exposed to sun and wind; no poor packing; no heated trees; the stock is sent out in the best possible condition. I sincerely believe your plant and methods the greatest benefit to the orchard planter in Colorado.

H. A. RICHARDSON,

Horticultural Inspector for Delta county, 1906-1911.

GRAND JUNCTION, Col., June 13, 1911.

I have assisted in the inspection of a number of cars of trees in your house, and have always been impressed with the precautions you take to avoid drying, or other damage to the stock. Your inspection-room is so well lighted that the inspector has a chance to detect and intercept diseased trees. This fact I consider greatly to your credit, and to the advantage of your customers.

E. P. TAYLOR, Entomologist and Horticultural Inspector for Mesa county.

MONTROSE, COL., July 17, 1911.

If people who intend planting trees would inspect your packing-house, I think it would be a great benefit to them. I have inspected stock there. There is plenty of light; stock not exposed to sun or wind, and is given the best care.

ARTHUR A. MOORE, Horticultural Inspector for Montrose county.

DOLORES, COL., April 15, 1911.

Herewith find certificate of your recent shipment to this place. I looked carefully for things to throw out, but found only clean, splendid stock throughout. I wish to thank you for the same.

C. H. TAYLOR, Horticultural Inspector for Montezuma county.

On July 1, we wrote asking customers for reports on trees purchased from us. The reports follow:

Ashenfelter, John (estate of), Montrose, Col. . . . .	"lost one," from 1,750
Blaine, H. H., Hotchkiss, Col. . . . .	"98 per cent grew"
Brown, S. L., Austin, Col. . . . .	"lost four," from 400
Cedaredge Orchard Co., Cedaredge, Col. . . . .	"lost 49 trees," from 4,850
Casley, J. J., Olathe, Col. . . . .	"98 per cent grew"
Coburn, W. S., Hotchkiss, Col. . . . .	"making a fine growth, no cause for complaint"



Interior of packing-house, looking into one of the fumigators; showing the cold-air ducts (concrete) built beneath the floor level; and one of the plugs (against the wall) for closing the ducts.

Cowgill, L. M., Paonia, Col. . . . .	"all started," 230 trees
Coyle, R. F., Paonia, Col. . . . .	"lost one," from 190
Dale, H. R., Delta, Col. . . . .	"lost one," from 350
Duling, W. N., Delta, Col. . . . .	"lost one," from 150
Fargo, J. P., Yucaipa, Cal. . . . .	"lost six," from 400
Gibson, J. W., Austin, Col. . . . .	"lost four," from 250
Hart, John, Austin, Col. . . . .	"all grew," 150
Hillman, W. G., Delta, Col. . . . .	"will replant 20," from 750
Hazlett, T. A., Delta, Col. . . . .	"lost four," from 250
Kimball, F. E., Eckert, Col. . . . .	"all grew"
Ladd, E. E., Delta, Col. . . . .	"99 per cent grew"
Lewis, A. L., Austin, Col. . . . .	"not a tree failed," 400
Lantz, J. P., Paonia, Col. . . . .	"four did not grow," 150
McPike, F. W., Hotchkiss, Col. . . . .	"every one grew," 100
Morse, Frank, Cedaredge, Col. . . . .	"lost two," 150
McConnell, F. W., Delta, Col. . . . .	"lost three," 760
Meek, M. G., Hotchkiss, Col. . . . .	"lost five," 400
Reynolds, A. L., Eckert, Col. . . . .	"every one lived"
Rinehard, C. W., Cedaredge, Col. . . . .	"not a dead one," 800
Taylor, J. W., Eckert, Col. . . . .	"every one grew," 350
Wright, S. M., Delta, Col. . . . .	"all lived," 120

The following parties have also had business with me :

#### Austin, Colorado

Hawker, Henry  
Ratekin, J. B.  
Van Meter, Mrs. F. S.  
Williamson, G. E.

#### Cedaredge, Colorado

Curtis, R. W.  
Curtis, C. L.  
Dillon, C. H.  
Dingman, W. W.  
Motto, P.  
Morse, O. P.  
Mills, H. H.

#### Cory, Colorado

Gwynn, G. M.  
Hubbard, E. F.  
Lacock, S. H.  
Kennicutt, Wm.  
Starks, Wm.

#### Delta, Colorado

Cook, W. G.  
Darling, Herman  
Perkings, M. H.  
Sweitzer, L. W.  
Wigram, L. R.  
Welch, M. R.

#### Denver, Colorado

Allen, H. C.,  
715 Kittrege Building.  
Buchenau, H. D.,  
Colorado National Bank.  
Bonfils, Thomas L.,  
County Clerk.  
Curtis, L. B.,  
710 Kittrege Building.  
Edbrooks, H. W. J.,  
F. E. Edbrooks Architect Co.  
Kelly, Dr. H. P.,  
Tabor Opera House Building.



## HERBERT CHASE, DELTA, COLORADO

### Denver, Colorado, continued

Roberts, S. L.,  
Gas & Electric Building.  
Pugh, C. H.,  
P. O. Box 564.

### Eckert, Colorado

Bertram, B. L.  
Simpson, J. O.  
Pitman, John

### Hotchkiss, Colorado

Brinton, C. A.  
Baker, T. J.  
Wilmont, Ross  
Wilson, Paul

### Montrose, Colorado

Nye, S. H.  
Widmann, E. G.

### Olathe, Colorado

Peterson, H. T.  
Westessen, Carl

### Paonia, Colorado

Ballard, E. M.  
Ernst, L. T.  
Lindsay, C. A.  
Matthews, E. J.  
North Fork Fruit Growers  
Association

### Paonia, Colorado, continued

Roberts, A. L.  
Van Deren Brothers

### Pueblo, Colorado

Bergerman, Benj.  
Fist, Ed.

### Utah

Curtis, R. P., Provo  
Denne, A. E., Green River  
Filson, W. N., Elberta  
Whitney, N. B., Elberta

## Price, Terms and Guarantee

ORDERS FOR PETTY QUANTITIES AND ODD VARIETIES are not accepted.

My business is growing in quantity, varieties to be planted in a large way. Every effort is used to have grades exact; to prevent mixtures.

There must be a rigid system.

After inspection, trees are tied in bundles containing 10 or 25 of a variety. Two labels are put on each bundle. If bundles are broken, there is danger of mixture, and the system is upset.

Orders must be for quantities in multiples of 10 or 25 of a variety. We can not sell 22, but can sell 20 or 25; we can not sell 1,037, but can sell 1,035 or 1,040.

It is not wholly a question of securing your order; but my business must be handled with satisfaction to you, and credit to myself.

You may think me notional, but this system will be observed in my business.

PRICE.—I do not depend on price for business. My trees are for sale in wholesale quantities, at wholesale prices; they are sold for far lower prices than trees as good can be bought through agents. I do not quote prices on trees in this booklet, because prices change, and this booklet will probably be used several seasons. If you wish to buy stock, mail a list of your wants and I will quote the price.

A prominent man, connected with the fruit industry here, said to me, "You sell your trees too cheap. If you asked more, you would make some sales that you miss. Some people are suspicious of low prices." The explanation for this is, I do not employ agents; do not pay commissions; it costs me practically nothing to make my sales. Under my system, I receive more net cash than if my trees were sold 50 per cent higher through agents.

Price does not always tell the story. For instance, in spring of 1910, Carl Westesen, Olathe, Colorado, planted 1,250 "cheap" trees from another nursery; 125 lived; they cost him \$125. The same season W. S. Girardet, Cedaredge, Colorado, planted 4,850 from us; 4,801 lived. What is the answer? Ask Westesen or Girardet.

Last summer I built a bungalow here for a home; had three bids on the brick work, \$610, \$692, \$746, all were to use the same brick. I gave the contract to the \$746 man, because I had faith to believe I would get the best job.

It is often true that a man who plants an orchard has only a vague idea of what constitutes a first-class tree, but the man is to be pitied who knows a good tree and then plants a second-class one because it is cheaper. Cheap trees are seldom, if ever, a bargain; the grower should insist on having first-class trees.—*Fruit Growing in Arid Regions*, p. 37.

TERMS.—Orders are not accepted unless the purchaser is commercially responsible. I solicit your business exactly as any wholesale house does; do not want you

## CHASE TREES FOR IRRIGATED SECTIONS

to sign any sort of "contract"; simply ask for your order. If the trees are as represented, then we want the pay; if they are not as represented, you do not have to pay for them.

CAUTION.—Orders are accepted upon condition that they shall be void should injury befall the stock, from frost, hail, storm, fire, strikes, or other causes over which we have no control.

GUARANTEE OF LIFE.—I do not guarantee life; that is impossible. I know how to care for trees; results show that. I deliver trees to you in perfect condition, then my responsibility ceases.

GUARANTEE OF GENUINENESS.—I exercise the greatest care to keep varieties pure and true to name, and hold myself in readiness at all times to replace, on proper proof, all stock that may prove otherwise, or refund the amount paid; but it is mutually agreed between the purchaser and myself that I shall not be liable for any amount greater than the original purchase price.

In every line of business there are firms known for the quality of their product. The name of one means quality in jewels; of another, quality in wagons; of another, quality in hats. Likewise, I mean my name to stand for quality in nursery stock.

### Grafting-Wax

There are many kinds of grafting-wax, but the one which is the most serviceable for applying with the hands in the open air is made by melting together one part (by weight) tallow, two parts beeswax, four parts rosin. Pour a convenient portion of the melted liquid into a pail of cold water, when it immediately hardens. Take it up with the hands and pull like candy. When it becomes light yellow, it is finished, and can be made into balls and put away for future use. It will keep indefinitely. When used, the warmth of the hands will cause it to soften. When handling it, the hands should be greased with tallow to prevent it from sticking.

### A Valuable Book

FRUIT-GROWING IN ARID REGIONS. By PADDOCK AND WHIPPLE

In connection with the Agricultural Experiment Station, at Fort Collins, Colorado, the authors spent several years in work and experiment in the orchards of the western slope; the object being to help the intelligent fruit-grower. The book tells about:

Pruning.	Top-grafting.	Influence of pruning on bearing habit.
Spraying.	Orchard soils.	Interplanting of varieties on account of cross-fertilization.
Altitude.	Preparing land.	
Irrigation.	Orchard pests and their control.	

This book will be found a great help, it ought to be in the hands of every fruit-grower in the irrigated sections.

By special arrangement with the publisher (The Macmillan Company), we can mail you this book for \$1.10, although the publisher's price is \$1.50.

### Varieties

The fruits grown in this irrigated section are so fine in quality and color; so handsome and stand transportation so well, that they are wanted in distant markets. They are sold where the best is demanded. This section has made a reputation on

## HERBERT CHASE, DELTA, COLORADO

a few sorts; my business is in growing those sorts in a large way; they are too well known to need description.

I do not "introduce" new or untried sorts, or "novelties;" I do not advise planting such, unless in an experimental way; stick to what you know to be money-makers, and plant only two or three varieties, which will enable you to load solid cars of one variety and grade; such cars sell for the most money.

Iowa and Illinois farmers are particular about their seed corn; sugar-beet men are particular about their seed; you should be just as particular about your trees. Plant only what you know to be the best.

A letter to me from the Agricultural Experiment Station, Ames, Iowa, dated March 6, 1911, reads:

Comparing the average for the last five years with that from 1901 to 1905, inclusive, there is an increase of 2.62 bushels (corn) in favor of the 1906 to 1910 period.

For the year 1904, the acreage in corn in Iowa was 7,435,850. This increase means an added yield of 19,481,927 bushels. Selecting seed from improved strains did it.

I believe in propagating from exact parent trees; as is well known, there are strains better than others of the same variety; better in color, size or quality. For instance, Rome Beauty from the trees of W. P. Heddles, Paonia, Colorado, have taken the *blue ribbon* wherever they have been shown, twice at National Apple Shows (Horticultural Congress, Council Bluffs, 1910, and Denver Apple Show, 1909); Colorado State Fair, Pueblo, 1910. I visited this orchard and secured scions from those particular trees.

Blue Ribbon Jonathan and Winesap were from the orchard of William Ingram, Grand Junction. I visited this orchard when fruit was on the trees, to mark the particular trees; later I went to those trees and cut the scions.

Blue Ribbon Stayman Winesap were from the orchard planted by W. H. Garvin, Paonia, eight years ago, and now owned by Rittenhouse & Drake. Two years ago I secured the scions from this orchard. I can tell you the parentage of all varieties I grow.

### APPLES

#### VARIETIES OF APPLE FOR PLANTING SPRING 1912

Banana (Winter Banana)	Northwestern Greening
Gano	Rome Beauty
Grimes (Grimes' Golden)	Stayman (Stayman Winesap)
Geniton (Rawle's Janett)	White Winter Pearmain
Jonathan	Winesap

A few sales, F. O. B. cars, at points named.

By the Surface Creek Fruit Growers' Association, Austin, Colorado:

September 29, 1909, car of 504 boxes Jonathan and Grimes', grown by Henry Hawker, at \$1.97 per box, \$993.

September 29, 1909, car of 504 boxes Jonathan, grown by Dr. A. E. Miller, at \$2 per box, \$1008.

September 30, 1909, car of 504 boxes Grimes' Golden, grown by Henry Hawker, at \$2.03 per box, \$1022.80.

October 5, 1909, car of 630 boxes Jonathan, grown by Dr. A. E. Miller and F. M. Hinman, at \$2 per box, \$1260.

October 15, 1909, car of 756 boxes Rome Beauty, grown by Dr. A. E. Miller, at \$2 per box, \$1521.

October 15, 1909, car of 532 boxes Rome Beauty and Winesap, by ten growers, at \$1.97 per box, \$1049.

October 26, 1909, car of 504 boxes Rome Beauty, grown by Henry Hawker, at \$2 per box, \$1008.





Where the Desert ends and the Orchard begins.

By the North Fruit Growers' Association, Paonia, Colorado:

October, 1910, car of 504 boxes Jonathan, to J. C. Coulson Fruit & Produce Co., Trinidad, Col., at \$1.75 per box, \$882.

September 29, 1910, car of 504 boxes Jonathan, to Grinnell-Collins, Minneapolis, Minn., at \$1.75 per box, \$882.

October 3, 1910, car of 504 boxes Jonathan, to E. P. Stacy & Sons, Minneapolis, Minn., at \$1.75 per box, \$882.

October 11, 1910, car of 504 boxes Winesap, to Garibaldi & Cueno, Chicago, Ill., at \$1.75 per box, \$882.

November 1, 1910, a car of Winesap, Geniton, Missouri Pippin, Gano, and Red Pearmain, at an average of \$1.45 per box.

November, 1909, a car of 630 boxes Rome Beauty, grown by A. L. Roberts, Paonia, at \$2.10 per box, \$1323. Mr. Roberts sold his apple crop this year, from twenty-six acres, for \$21,909.80. Twenty-one acres were in full bearing; five acres were top-worked trees which did not come into full bearing until the year following.

By the Grand Junction Fruit Growers' Association, Grand Junction, Colorado. Season, 1909:

Jonathan, Winesap and White Winter Pearmain, from five and one-half acres, grown by P. J. Cheddle, \$6,740 net to the grower.

November, 1909, John Markle, California Mesa, Delta, sold the fruit from sixty-five Rome Beauty trees for \$1,300

The ninth year after planting, J. P. Caldwell, Cedaredge, Col., sold, from three and one-fourth acres of Jonathan, 1,300 boxes that averaged better than \$1.75 per box.

## APRICOT

Moorpark

Wilson

## CHERRY

Of all fruits, the Cherry must have dry soil; when irrigating, the rule should be give only enough water to keep the trees in good condition, and no more. Cherries do not require, and will not withstand, as much water as most other fruits. There are two distinct classes:

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**Hearts, or Bigarreaus.** Large-growing trees, with large leaves and large fruits; often called "Oxheart" and "Sweet" Cherries. These are valuable for dessert use. There is much complaint about securing a good stand of this class of cherry trees. Three factors enter into the difficulty: trees not being dormant at planting; trees are given too much water; trees are deficient in roots. As a rule, failures can be traced to one of these causes. We bud this class on Mazzard stocks, which are more difficult to bud, and cost more, but they are the natural stock for this tree, have more fibrous roots, are safer, are best.

Spring, 1911, Professor Condit, Superintendent of Schools, Delta, planted twenty-four Sweet Cherry trees from us. August 12, twenty-one were growing, twenty were extra fine. Professor Condit *did his work well*; he had good trees on Mazzard roots.

### VARIETIES

Black Tartarian

Lambert

Bing

Royal Ann

**Royal Duke.** This sort is a cross between the two classes, and does remarkably well in this section. In the Palisades district it has been very profitable.

**Dukes, or Morellos.** Smaller-growing trees, with smaller leaves and smaller fruits; called "Sour" Cherries. More valuable than the others for culinary purposes. Enormous bearers; more easily transplanted.

### VARIETIES

Early Richmond

Montmorency

Wragg

CEDAREIDGE, COL., July 5, 1911.

Clarence Overhalts sold ninety dollars' worth of Cherries, this season, from three trees.

## PEACH

Elberta is the only one planted here in a large way, for distant markets. The others are planted for near-by markets and for home use. Varieties are listed in their order of ripening.

**Arp Beauty.** Most valuable early Peach. Freestone. Rich, yellow flesh; crimson cheek; showy; good quality.

**Carman.** Follows Arp Beauty about twelve days. Freestone; white flesh; good quality; ships well.

**Champion.** About three weeks later than Carman. Freestone; white flesh with blush cheek; one of the best in quality.

**Elberta.** About ten days later than Champion. Freestone. This variety, planted in a large way, produces most of the fruit shipped to distant markets. Yellow flesh; crimson cheek; the best shipping Peach, and probably the most valuable Peach in the world.

A few sales by the Surface Creek Fruit Growers' Association, f.o.b., Austin, Col.:

September 12, 1909, car of 757 Extra Elberta at 75 cents, and 251 Fancy Elberta at 69 cents per box, \$741.

September 14, 1909, car of 955 Extra Elberta at 75 cents, and 242 boxes Fancy Elberta at 68 cents per box, \$881.85.

September 16, 1909, car of 745 Extra Elberta at 70 cents, and 452 Fancy Elberta at 66½ cents per box, \$822.08.

By the Grand Junction Fruit Growers' Association, Grand Junction, Col.:

Season, 1907, Elberta Peaches grown by J. F. Moore on 4½ acres, \$3,300 net to the grower.

## PEAR

**Bartlett.** Probably the most valuable Pear grown; largely planted for market.

**Beurre d'Anjou.** Late fall or early winter; very profitable where it succeeds.

## CHASE TREES FOR IRRIGATED SECTIONS

**Kieffer.** Tree a strong, vigorous grower; foliage not so subject to diseases as other sorts, which makes it easy to grow. An enormous bearer of large, handsome fruit, of poor quality. In this section the fruit colors well, and it finds a market at good prices. On the whole, it is one of the most profitable Pears, if not the most so. Following figures are from the annual reports of the Grand Junction Fruit Growers' Association, Grand Junction, Colorado: 1907, eleven cars of Kieffer sold for \$10,087.12, net to the grower; averaged for fancy, four and five tier, \$2.09 per box; choice, four and five tier, \$1.46 per box. 1909, average prices realized, Bartlett, four and five tier, \$2.09; 1909, average prices realized, Kieffer, four and five tier, \$1.67; 1910, average prices realized, Bartlett, four and five tier, \$1.93; 1910, average prices realized, Kieffer, four and five tier, \$1.47. Thus, Kieffer is shown to sell well; because it is a heavy bearer, it is very profitable.

**Seckel.** Finest quality; small; valuable for home use or nearby markets.

### PLUM

GROWN FOR NEARBY MARKETS AND FOR HOME USE

Burbank  
Green Gage

Italian Prune  
Satsuma

Shropshire Damson

### QUINCE

Champion      Orange

### BERRY PLANTS, CURRANTS, GRAPES

All berry plants we sell were transplanted to the nursery and grown one year. Usually "sucker" or "tip" plants are sold, because they cost less; the plants we sell are these sucker and tip plants after they have been transplanted to the nursery and grown one year; thus they are thoroughly mature; have fine roots, and as a rule they give entire satisfaction.

Last spring we sold Mrs. E. S. Van Meter, Austin, Colorado, 1,000 transplanted Blackcap Raspberry plants; 32 plants did not grow, the living plants cost her a little over five cents each. A gentleman living in Delta planted 1,000 of the others, for which he paid \$16; in June he told me 160 plants from the lot grew; these cost him just ten cents each.

Because berries are grown for near-by markets, or for home use, we have selected the varieties best suited to this section:

**Blackberry.** Strong, transplanted plants. **Eldorado.** Large, jet-black, without hard core; melting, sweet, plant hardy and productive. Per 100, \$4.50.

**Dewberry.** Transplanted plants. **Lucretia.** A low-trailing Blackberry. Large, soft, sweet, good quality, no hard cores. Per 100, \$4.

**Black Raspberry.** Transplanted plants. **Black Diamond.** Hardy and healthy. Similar to Gregg, but more prolific, more profitable, a stronger grower. Where known, it is considered the best Black Raspberry. Per 100, \$5. Black Raspberries are hardier than red Raspberries.

**Red Raspberry—Marlboro.** A standard well-known sort. Light crimson, firm, good, vigorous, productive. Per 100, \$4. Red Raspberries are of finer quality than black Raspberries; the plants are not so hardy, but they do well in the sheltered parts of this section.

**Strawberry Plants.** We do not sell these, because when handled with wooded plants they are apt to dry out or mold, and will not give satisfaction. Buy Strawberry plants from Strawberry-plant men; we will give you their address if you wish.

**Gooseberry—Columbus.** The best sort for this section. A strong, robust grower; foliage large and glossy, and here seems to be freer from mildew than the others. Fruit large and of the highest quality. Per 100, \$15.

**Currant—Fay's Prolific.** Red. Large berry, juicy, fine flavor. The best red currant for this section. Per 100, \$6. Black Currants are of little value here; we do not sell them.

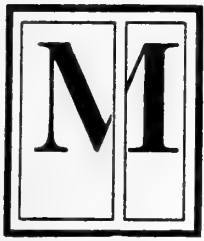
**Grape—Agawam.** Red, early, fine quality, good keeper. Per 100, \$7.50. **Concord.** Black, early, strong grower, hardy, healthy and productive. Decidedly the most popular Grape in America. Per 100, \$5. **Niagara.** White, early, vigorous and productive. Per 100, \$7.50

At all times we shall be glad to answer questions, or give information.

We should like to have an opportunity to supply your wants in trees and plants.

HERBERT CHASE.

*The McFarland Publicity Service, Harrisburg, Pa.*



**ISTAKES** are no good unless they cure. I've tried to avoid mistakes in this pamphlet, but there may be some. If so, I will thank you to tell me. I will appreciate criticisms from experienced orchardists in the irrigated sections.

**Delta, Colorado  
Spring 1912**

**HERBERT CHASE**





# Roasts and Roses



"We are inclined to think some people will believe what you have said. The plates are good, except the floor is too clean on page 13."—J. H. Skinner & Company, Topeka, Kansas.

\* \* \*

"It certainly is a departure from the general run of these things. I am mighty glad to see it. I consider selling through agents the curse of the nursery business today. I certainly congratulate you upon the nifty step you have taken. Feeling that your initiative will give some food for others to digest, and great good will come of it."—J. B. Pilkington, Portland, Oregon.

\* \* \*

"We enjoy most of it, but it makes us feel bad to think you would reach over into the other's man's business and take a fling at us poor unfortunates who work agents."—Smith Brothers, Concord, Georgia.

\* \* \*

"Have read every word, and as a fruit grower, can endorse it tetotum."—G. H. Merchant, Paonia, Colorado.

\* \* \*

"I consider this as good a catalogue as it has been my privilege to look over for some time."—Don H. Bark, U. S. Department of Agriculture, Irrigation Investigation, Boise, Idaho.

\* \* \*

"It is a bully book. The man who gets it will surely appreciate the practical matter you have given him."—Earl M. Wilson, Publicity Man for Stark Bros'. Nurseries & Orchards Company, Louisiana, Missouri.

\* \* \*

"With the personal attention you give your business you certainly get results. That packing house is a gem. Your ventilating system is certainly fine. We are interested in all you have to say."—Washington Nursery Company, Toppenish, Washington.

\* \* \*

"It is one of the most instructive and interesting books I have read. I take pleasure in giving you the names of the following Colorado Springs people who are interested in trees."—City Forester of Colorado Springs, Colorado.

\* \* \*

"I have read every word and agree with you; there is not an idle word in it. I make my living by selling nursery stock through agents. Therefore, I shall keep your publication locked up in my desk instead of laying it on top, where one can pick it up. I like your way of business."—Homer N. Chase & Co., Auburn, Maine

\* \* \*

"I believe you have crowded a large amount of valuable information most practical to the fruit grower into a very small space. I would be glad to have you send a copy to each of the County Horticultural Inspectors of this state." (Then follows a list of the Horticultural Inspectors.)—C. P. Gillette, State Entomologist, Fort Collins, Colorado.

\* \* \*

"Please send one to my boy, Will, so that he may read and learn some just common sense. He is doing a good nursery business on your system."—J. M. Enschede, Orchard Superintendent, Sunset Orchard Land Company, Stevensville, Montana.

\* \* \*

"I wish to put my O. K. on your book. I know that every statement you make is absolutely correct. I am

glad that you have side-stepped from the stereotyped order of other catalogues."—W. P. Stark, Manager of the Stark Bros'. Nurseries & Orchards Company, Louisiana, Missouri.

\* \* \*

"I have read your book from start to finish. Was in hopes I could find fault with it, but cannot. It is concise and direct to the point."—D. S. Lake, Shenandoah, Iowa.

\* \* \*

"It is just such a one as I wish I could get up myself. I have read it to father and he says it is the best he has ever seen."—One of the best known nurserymen in the country, located in Western New York.

\* \* \*

"You have broken all precedence by publishing the names and addresses of your customers. We judge your methods are practical for fruit growing sections like Colorado, where fruit growing is made a business."—New Haven Nurseries, New Haven, Missouri.

\* \* \*

"Your book tells one of the best tree-planting stories of any I have ever read."—E. P. Taylor, Resident Manager The Mid-Continent Orchards Co., Parker, Kansas. Formerly Horticultural Inspector for Mesa County, Colorado.

\* \* \*

"I wish to compliment you upon the unusual merit of your book. It has the right ring. It sets a new pace in advertising and will be a great help to the public."—Jim Parker, Tecumseh, Oklahoma.

\* \* \*

"This is good. Continue to edit and write your own printed matter. In other words, continue to burn your individuality into your work. No man is thoroughly hated, or, for that matter, loved, unless he shows a strong individuality along some lines."—California Rose Company, Pomona, California.

\* \* \*

"Please mail copy to Mr. Vaughan, care Royal Poinsetta Hotel, Palm Beach, Florida. Mr. Crop wishes to keep the one you have sent here."—Vaughan's Seed Store, Chicago, Illinois.

\* \* \*

"You know what they should plant even better than the planters themselves."—J. H. Baird, Superintendent of the Hale Orchards.

\* \* \*

"First shipment of 1,590 trees arrived in good condition. The inspector threw out three trees, but you sent more than enough to cover these. The trees are fine. They seem even better than mine were last year."—(Three days later an additional order for 1,950 trees.)—J. P. Fargo, Yucaipa City, California.

\* \* \*

An order for 1,800 Jonathan.—A wholesale saddlery manufacturer in Denver, Colorado.

\* \* \*

"After investigation I decided to send you my order," which was inclosed; 1,265 trees.—A planter in Rio Arriba County, New Mexico.

\* \* \*

An order for 1,000 Jonathan.—A well-rated firm in Cozad, Nebraska.

\* \* \*

"Our manager at Eckert will place with you an order for new land to be planted this spring."—An old customer in Minneapolis.

And thus they say things about,

*"Chase Trees for Irrigated Sections."*

HERBERT CHASE,

Delta, Colorado





**HERBERT CHASE**  
**CHASE TREES**  
**FOR IRRIGATED SECTIONS**

DELTA, COLORADO, JULY 15, 1912.

Dear Sir:

The fruit crop is good, conditions are favorable, you may expect a tree agent around any day who will say nice words and will expect your order for trees.

My business is growing trees. Of course they are grown to sell, but my trees are not sold through agents. My business increases each year because my trees are reliable; I depend on quality, instead of agents' talk. Over seventy-five per cent of my last year's business came from old customers, or their friends, who sent their unsolicited orders because they had the faith to believe my trees were reliable and my methods fair.

Many times last season I was told by good men, "Chase, send an agent to work that place. They buy trees, you could sell a lot more if you would only try." I do not send out agents because it is impossible to do a clean, reliable, satisfactory business through tree agents. Tree agents are not particular as to their methods---I am. Tree agents do not understand the nursery business---I do. Furthermore, my trees are the best to be had and I sell apple trees at 15c each, while agents sell such trees for 22c, 25c, or 27c each, according to the agent.

I want your business, but only on a fair, clean business basis.

I will have my usual stock next spring and hope to be favored with your trade. My new booklet will be ready for the mail about December. This will contain plain directions for pruning and planting, and other information of value to the fruit grower. It will also show the most reliable tools for pruning, including pruning shears, long handle pruners, pruning saws, extra saw blades, etc. For purposes of advertising, and to help spread the gospel of reliability, these tools will be sold to fruit growers at wholesale price. This booklet will be mailed free. I would like to send you one. If you wish one please send me a post card requesting a copy and your name will be entered on my mailing list.

Yours truly,

HERBERT CHASE.




**Post-Card**

PLACE  
ONE CENT  
STAMP  
HERE

**CHASE TREES**

**Delta**

**Colorado**

 We should like to mail this booklet to parties who are interested in tree planting in the irrigated sections, and will thank you for their address.

*Please mail "Chase Trees for Irrigated Sections" to the following parties:*

NAME	POST OFFICE	STATE
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_____	_____	_____
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*Yours truly,*

\_\_\_\_\_  
ADDRESS \_\_\_\_\_

\_\_\_\_\_



